

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): An endotracheal tube comprising a tube obtained by subjecting a resin composition comprising a hydrogenated styrene-isoprene-styrene block copolymer as a styrenic elastomer and polypropylene as a polyolefin to extrusion-molding, wherein

the weight ratio of the polypropylene to the hydrogenated styrene-isoprene-styrene block copolymer (polypropylene/hydrogenated styrene-isoprene-styrene block copolymer) is 20/80 to 40/60;

the tube has a storage modulus (~~MD~~) of 5.0×10^7 to 8.0×10^8 dyne/cm² in the extrusion direction ~~of~~ at 25°C ~~and~~ ; and

the tube has a ratio of the storage modulus (~~MD~~) in the extrusion direction to a storage modulus (~~TD~~) in the circumferential direction (~~MD/TD~~) (storage modulus in the extrusion direction/storage modulus in the circumferential direction) of not more than 1.3 at 25°C.

Claim 2 (Currently Amended): The endotracheal tube according to claim 1, wherein the endotracheal tube is provided with a cuff obtained by subjecting a resin composition comprising a styrenic elastomer and a polyolefin to blow-molding on ~~an~~ the outer peripheral surface of the endotracheal tube, the cuff has a storage modulus of not more than 5.0×10^8 dyne/cm² at 25°C, and the resin composition constituting the cuff has a melt tension of not less than 1 g at 230°C.

Claims 3-7 (Canceled)

Claim 8 (Currently Amended): The endotracheal tube according to ~~claim 3~~ claim 1,
wherein

the hydrogenated styrene-isoprene-styrene block copolymer comprises a styrenic
polymer block (A); and

the content of the styrenic polymer block (A) in the block copolymer is 10 to 40% by
weight.

Claim 9 (Original): The endotracheal tube according to claim 1, wherein the resin
composition constituting the tube further comprises at least one lubricant selected from the
group consisting of a fatty acid amide lubricant and a fatty acid monoglyceride lubricant in an
amount of 0.05 to 0.5% by weight.

Claim 10 (Original): The endotracheal tube according to claim 2, wherein the resin
composition constituting the cuff further comprises at least one member selected from an
inorganic filler and an organic cross-linked particle in an amount of 5 to 20% by weight.

Claim 11 (Original): The endotracheal tube according to claim 10, wherein at least
one member selected from an inorganic filler and an organic cross-linked particle is at least
one member selected from the group consisting of talc, calcium carbonate, mica, cross-linked
acrylic resin beads, cross-linked polyurethane beads and cross-linked polystyrene beads.

Claim 12 (Canceled)

Claim 13 (New): The endotracheal tube according to claim 1, wherein
the hydrogenated styrene-isoprene-styrene block copolymer comprises a
hydrogenated polyisoprene block made of a polyisoprene having a 1,2-bond and a 3,4-bond
content of 10 to 75% by mol; and
not less than 70% of carbon-carbon double bonds of the polyisoprene are
hydrogenated.

Claim 14 (New): The endotracheal tube according to claim 1, wherein
the hydrogenated styrene-isoprene-styrene block copolymer comprises a
hydrogenated polyisoprene block; and
the content of vinyl bonds in the hydrogenated polyisoprene block is 10 to 75% by
mol.

Claim 15 (New): The endotracheal tube according to claim 1, wherein
the hydrogenated styrene-isoprene-styrene block copolymer comprises a
hydrogenated polyisoprene block made of a polyisoprene; and
not less than 70% of the carbon-carbon double bonds of the polyisoprene are
hydrogenated.

Claim 16 (New): A method of making an endotracheal tube, the method comprising
extrusion-molding a resin composition comprising a hydrogenated styrene-isoprene-
styrene block copolymer as a styrenic elastomer and polypropylene as a polyolefin; and
producing the endotracheal tube of Claim 1.

SUPPORT FOR THE AMENDMENT

This Amendment amends the specification to correct typographical errors; cancels Claims 3-7 and 12; amends Claims 1-2 and 8; and adds new Claims 13-16. Support for the amendments is found in the specification and claims as originally filed. In particular, support for Claim 1 is found in Claims 3-4 and in the specification at least at page 4, line 19 and page 12, lines 13-15. Support for new Claims 13-15 is found in the Specification at least at page 6, lines 1-19. Support for new Claim 16 is found at least in Claim 1. No new matter would be introduced by entry of these amendments.

On entry of these amendments, Claims 1-2, 8-11 and 13-16 will be pending in this application. Claim 1 is independent.

REQUEST FOR RECONSIDERATION

Applicants respectfully request entry of the foregoing and reexamination and reconsideration of the application, as amended, in light of the remarks that follow.

The present invention relates to an endotracheal tube that (i) is not composed of a plasticized-polyvinyl chloride that can generate a harmful dioxin when burned, (ii) and is excellent in kink resistance, slidability and prevention of sticking and (iii) has excellent transparency. The endotracheal tube is obtained by subjecting a resin composition comprising a specific styrenic elastomer and a polyolefin to extrusion molding.

Claims 1, 3-4 and 8 are rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,184,291 ("Ahmed"). In addition, Claims 2 and 10-12 are rejected under 35 U.S.C. § 103(a) over Ahmed in view of U.S. Patent No. 4,552,914 ("Sterling"). Claim 9 is rejected under 35 U.S.C. § 103(a) over Ahmed in view of U.S. Patent No. 5,189,110 ("Ikematu").

Ahmed discloses a thermoplastic elastomeric composition comprising (a) from about 50 to about 99 percent by weight of at least one block copolymer and (b) about 1 to about 50

percent by weight of at least one ethylene interpolymers. Ahmed at Abstract. Ahmed discloses that

The term "interpolymer" is used herein to indicate a copolymer, or a terpolymer, or the like, where, at least one other comonomer is polymerized with ethylene to make the interpolymers. Ahmed at column 4, lines 46-49.

Ahmed discloses that Ahmed's composition can be further combined with "other natural or synthetic resins", such as polypropylene, to improve properties. Ahmed at column 16, lines 31-39.

However, Ahmed fails to suggest the independent Claim 1 limitations of "an endotracheal tube comprising ... a resin composition comprising a hydrogenated styrene-isoprene-styrene block copolymer... and polypropylene..., wherein the weight ratio of the polypropylene to the hydrogenated styrene-isoprene-styrene block copolymer... is 20/80 to 40/60". A resin composition comprising this specific mixing ratio results in an endotracheal tube having excellent transparency and kink resistance. See, specification at page 12, lines 10-15. In contrast, if Ahmed's ethylene interpolymers is used in place of the polypropylene, an endotracheal tube with excellent transparency cannot be obtained.

The secondary references fail to remedy the deficiencies of Ahmed. In particular, Sterling discloses a blend comprising styrene-ethylene-butylene-styrene block copolymer and polypropylene. Sterling at Abstract. However, Sterling fails to suggest the hydrogenated styrene-isoprene-styrene block copolymer of independent Claim 1.

Because Ahmed, Sterling and Ikematu fail to suggest all the limitations of independent Claim 1, the prior art rejections over Ahmed, Sterling and Ikematu should be withdrawn.

Claims 5-7 are rejected under 35 U.S.C. § 103(a) over Ahmed in view of JP 10-067894 ("Ishii"). Claims 5-7 are canceled, so the rejection is moot and should be withdrawn.

Claims 1-2 are rejected under 35 U.S.C. § 112, second paragraph. To obviate the rejection, the terms "MD" and "DT" are deleted from Claim 1; and Claim 2 is amended to recite "the outer peripheral surface of the endotracheal tube".

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance. Applicants respectfully request favorable consideration and prompt allowance of the application.

Should the Examiner believe that anything further is necessary in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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